NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

N JO 7210.890

Effective Date:
December 10, 2015

Cancellation Date:
May 26, 2016

SUBJ: Time Based Flow Management (TBFM)

1. Purpose of This Notice. This notice amends Paragraphs 6-1-7, Display of Traffic Management Advisor (TMA) Information, 17-6-4, Types of TMIS, and Chapter 17, Section 25, Traffic Management Advisor (TMA), in Federal Aviation Administration (FAA) Order 7210.3, Facility Operation and Administration.

2. Audience. This notice applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives.

3. Where Can I Find This Notice? This notice is available on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/ and on the air traffic publications Web site at http://www.faa.gov/air_traffic/publications/.

4. Explanation of Policy Change. This change will incorporate responsibilities for the use of TBFM. It provides specific directions to facilities as to duties and responsibilities.

5. Procedures.

Amend the following paragraphs to read as follows:

6−1−7. DISPLAY OF TIME BASED FLOW MANAGEMENT (TBFM) INFORMATION

Configure TBFM delay information for single−center metering (SCM) or adjacent−center metering (ACM) to display TBFM schedule information on the main display monitor (MDM).

17-6-4. TYPES OF TMIS

Title thru **f.3**., no Change

4. Time-Based Metering (TBM). The action of personnel providing air traffic services to meet a scheduled time at which airborne aircraft should cross a metering point or arc.

Part 5. TRAFFIC MANAGEMENT SYSTEM

Chapter 17. Traffic Management National, Center, and Terminal

Section 25. Time-Based Flow Management (TBFM)

17−25−1. GENERAL

a. TBFM is the hardware, software, methods, processes, and initiatives to manage air traffic flows based on time to balance air traffic demand with system capacity, and support the management of Performance Based Navigation (PBN).

b. TBFM provides a dynamic timed based environment, which increases efficiency and minimizes delays, compared to the use of static miles-in-trail. TBFM is a comprehensive, automated method of departure scheduling, en route adjustments, and arrival management. TBFM increases situational awareness through its graphical displays, timelines, and load graphs. TBFM trajectories are optimized for each aircraft to permit an accurate estimated time of arrival at an airport and provide scheduled times of arrival (meter times) that optimize the flow of traffic into a terminal area by adding more predictability to the ATC system. TBFM enables the routine use of Performance Based Operations (PBO).

No further changes to paragraph

17−25−2. PURPOSE

a. This section establishes the purpose of TBFM.

b. TBFM is the expanded use of time based metering to enable gate-to-gate improvements in both fuel and throughput efficiencies by:

1. Applying spacing only where needed.

2. Allowing for the routine use of PBO.

3. Capitalizing on advanced aircraft Flight Management System (FMS) capabilities.

4. Adding more predictability to the ATC system.

No further changes to paragraph

17−25−3. POLICY

When departure and or arrival flows are subject to TMIs, or when supporting PBN procedures, TBFM must be used to the maximum extent feasible in preference to miles-in-trail initiatives. Procedures for use of the capabilities within TBFM, in support of PBN operations and TMIs, must be documented in facility directives.

NOTE−
The benefits of TBFM are best realized through the coordinated effort of all facilities supporting PBN procedures or TMIs.

No further changes to paragraph

17−25−4. DEFINITIONS

a. Adjacent Center Metering (ACM). An extension of Single Center Metering (SCM) that provides time-based metering capability to neighboring facilities. There are three categories of ACM processing and control at a facility:

1. Managing Facility (Full Control Graphic User Interface (GUI)) – That facility which exercises control over SCM and/or ACM settings and the relevant metering operation.

2. Limited Control (Partial Control GUI) - The ability to manage specific ACM settings and activities for relevant metering operations.

3. Non-Controlling (Non-Control GUI) - A facility that only has monitoring capability.

b. Constraint Satisfaction Point (CSP) – A meter arc, meter fix, meter point or other meter reference elements.

c. Coupled Scheduling. Adds additional CSPs for an aircraft to meet the scheduled time of arrival along their route. This results in more optimal balancing and distribution of delays over a greater distance from the airport or CSP.

d. En Route Departure Capability (EDC). Scheduling capability that assists personnel providing traffic management services in formulating release times to a CSP to manage a mile-in-trail restrictions.

e. Extended Metering. Adds additional CSPs for an aircraft to meet the scheduled time of arrival along their route. This results in more optimal balancing and distribution of delays over a greater distance from the airport or CSP.

f. Ground-Interval Management-Spacing (GIM-S). Capability that provides automated speed advisories prior to descent to enable en route controllers to meet the Scheduled Time of Arrival (STA).

g. Integrated Departure/Arrival Capability (IDAC). Capability that automates the Call for Release process for departure scheduling and EDC.

h. Reschedule/Global Reschedule – The recalculation of generated frozen scheduled times of arrival (STA) resulting from an action taken at the TBFM GUI. Reschedule/Global Reschedule also commonly referred to as "rescheduling" or "rippling," can be executed as an independent function but is also accomplished when changes to TBFM configurations or settings occur.

i. Single Center Metering (SCM). Capability that provides personnel providing traffic management services with the ability to view and manage arrival flows to an ARTCC’s internal airports.

j. Supporting Facility. A facility, which maintains an ancillary relationship to the managing facility in supporting TBFM-related functions.

k. Time Based Flow Management (TBFM) is the hardware, software, methods, processes, and initiatives to manage air traffic flows based on time to balance air traffic demand with system capacity,

and support the management of PBN. This includes, but not limited to, TBM, ACM, SCM, EDC, TBS, IDAC, GIM-S, and Extended/Coupled Metering.

l. Time-Based Metering (TBM). The action of personnel providing air traffic services to meet a scheduled time at which airborne aircraft should cross a CSP.

m. Time-Based Scheduling (TBS)/Departure Scheduling. The action of personnel providing traffic management services to formulate time parameters for release of aircraft into an arrival flow.

No further changes to paragraph

17−25−5. RESPONSIBILITIES

a. The ATCSCC must:

1. Be the final decision authority for TBFM related operations and initiatives

a.2., no change

3. Maintain awareness of all TBFM-related operational activities within the NAS.

4. Include the status of pertinent TBFM related information on the planning telecons and on the National Airspace System Status display.

5. Prioritize day-to-day TBFM activity based on NAS and/or facility constraints.

6. Establish and maintain multi-facility communications when necessary for TBFM operations.

7. Log TBFM related activities.

b. The Managing Facility must:

1. Determine appropriate TBFM settings and parameters.

2. Ensure TBFM settings are entered via TBFM TGUI, kept current, and coordination is accomplished.

3. Determine TBFM activity timeframes and coordinate start/stop times with the ATCSCC and affected facilities.

4. Communicate TBFM activity start/stop information to operational areas, operating positions, and supporting facilities, and log.

5. Enable/Disable sector meter list as coordinated, where applicable.

6. Monitor internal and upstream compliance and take appropriate action.

7. Monitor TBFM airborne delays and initiate actions, as appropriate, when values exceed or are projected to exceed delays that can be absorbed by control sectors. Notify the FLM or affected areas/sectors of actions taken and expected outcomes.

8. Notify ATCSCC when unable to use TBFM capabilities, provide supporting justification, and log.

9. Coordinate internally with affected areas and with supporting facilities before taking action when changes to the metering strategy or updates to the TBFM schedule are necessary.

NOTE-
To the extent possible, avoid making any changes in TBFM that cause a reschedule/global reschedule during metering operations. Coordinate with affected facilities and sectors before a reschedule/global reschedule.

10. Ensure TBFM coordination procedures are placed into local SOP or LOAs between facilities.

***REFERENCE-*:**
FAAO 7210.3, 4-3-1, LETTERS OF AGREEMENT

11. Use TBFM to determine release times for facility controlled departures to a metered airport.

12. Ensure TBFM adaptations are maintained to reflect current operations.

13. Ensure trouble reports are submitted and reconciled.

14. Ensure TBFM training is completed.

15. Provide support to other local facilities with TBFM equipment.

16. Coordinate with appropriate entities for TBFM related activities.

c. Supporting facilities (ARTCC/TRACON/Tower) must:

1. Determine appropriate local TBFM settings.

2. Ensure TBFM settings are entered via TBFM TGUI, kept current, and coordination is accomplished.

3. Determine TBFM activity timeframes and coordinate start/stop times with the ATCSCC and affected facilities.

4. Communicate TBFM activity start/stop information to operational areas, operating positions, and supporting facilities, and log.

5. Enable/Disable sector meter list as coordinated, where applicable.

6. Use TBFM to determine release times for facility controlled departures to a metered airport.

c.7., no change

8. Notify managing facility when unable to use TBFM capabilities, provide supporting justification, and log.

9. Monitor internal and upstream compliance and take appropriate action.

10. Ensure TBFM training is completed.

11. Through the appropriate managing facility, supporting facilities must:

(a) Ensure adaptations are maintained to reflect current operations.

(b) Ensure trouble reports are submitted and reconciled.

(c) Provide support to other local facilities with TBFM equipment.

No further changes to paragraph

6. Distribution. This notice is distributed to the following ATO service units: Air Traffic Services, Mission Support, and System Operations; the Office of ATO Safety and Technical Training; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

7. Background. Traffic Management Advisor (TMA) was known as a comprehensive, automated method of planning efficient arrival trajectories from cruise altitude to the runway threshold. It increased situational awareness through its graphical displays, timelines, and load graphs. TMA trajectories have been optimized for each aircraft to permit an accurate estimated time of arrival at an airport and provide scheduled times of arrival (meter times) that optimize the flow of traffic into a terminal area. The next generation of TMA has begun. In this generation all references to TMA have been changed, now referencing it new name: Time-Based Flow Management (TBFM).

S/by Heather Hemdal
Heather Hemdal
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Mission Support Services

11/5/15
Date Signed